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Local Knowledge Going Global: Singapore's Exported Expertise in Indonesia, Vietnam and China

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Abstract

The hallmark of the Singapore `success story', state-led, market-driven interventions and their efficacy have often been a matter of academic contention. This paper, as part of our series on this topic, revisits Singapore's state-enterprise strategy in the context of the city-state's determined efforts at internationalization, in order to present an objective view on the purported transferability of this strategy in the framework of Regionalization21, a series of transborder industrialization experiments in Indonesia, Vietnam and China. These state-engineered projects, orchestrated to encapsulate economic space for Singapore-based firms to expand into the region, remain controversial; premised, as they are, on the exportability of Singapore's state credibility, systemic and operational efficiencies as well as technological competencies, to locations where these attributes are less distinct. To shed some light on this controversy, we present the latest evidence culled from surveys and interviews conducted in the Singapore-styled industrial-townships in these three countries. Our results show that the strategic advantage created in the industrial enclave in Indonesia remains uncertain; that the performance of the enclave in Vietnam is stable, if unspectacular; whilst the 'experiment' in China is arguably a measured success, now that vested interests are aligned. At the same time, however, additional complications relating to individual socio-political environments continue to plague the parks, even as they adapt to impending economic challenges.

Key words: Internationalization; State Enterprise Networks; Singapore's Overseas Industrial Parks

Introduction

With a history of having risen from post-colonial uncertainty to be an important base for multinational manufacturing in the region, Singapore has been previously described as the most successful economy among the four East Asian dragons by Giordano and Kato (1993). While said description has been rendered somewhat irrelevant in recent years, it remains an accepted truth that the Singapore government has laid a foundation for a corruption-free administration throughout the years; this, coupled with infrastructural efficiency and the overall integrity of its legal and financial systems, has played a central role in attracting foreign direct investments to fuel the city-state's economic development (Mirza 1986; Pang, 1987; Rodan 1989; Huff 1995). Of particular interest to certain quarters was the state-led, market-driven intervention which underscored the city-state's development strategies (Krause 1998; Low 1998; Blomqvist 2001).

However, in time, rising domestic business costs on top of the growing competition from emerging economies in the region rendered it an imperative for Singapore's economic planners to re-examine and expand the city-state's investment horizons (Wong and Ng 1991; Regnier 1993). The Singapore Economic Development Board (SEDB) positioned the city-state's

internationalization strategy in a policy paper, *Gearing Up for an Enhanced Role in the Global Economy* (SEDB 1988). The 1990 Global Strategies Conference and the 1993 Regionalization Forum added new dimensions to these deliberations (SEDB 1990; 1993a), while the policy documents, *Singapore Unlimited* and *Regionalization 2000*, encapsulated the stratagem for Singapore's participation in the dynamic growth of regional economies like Indonesia, Vietnam and China (SEDB, 1995a, 1995b; Pang 1995; Okposin 1999).

The Singapore government's role as a facilitator and partner is evident from the creation of familiar and friendly Singapore-havens via industrial parks in neighboring countries and the restructuring of tax policies (Singapore Ministry of Finance 1993; SEDB 1993b). The state also embarked on fostering trusted regional networks identical to those within its domestic market, whereby interlocking interests and a perceived commonality of values were to crystallize a system of cooperative competition. Implicit in this stratagem was the government's intent to draw on its state enterprise network (or, in local parlance, Singapore Inc.), and extend this network to facilitate business ventures in the region (Yeung 1998; Zutshi and Gibbons 1998; Pereira 2000). This strategy to remain economically competitive in the global economy has been characterized by the building of platforms for national growth through the management of strategic alliances and 'collaborations' with private or semi-private enterprises on national economic projects. Theoretically, the 'vested interests' within the interlinked collaborative system were to serve to expedite processes, garner exclusive incentives, and negate inept bureaucracy; like parts in an intricate and complex machine (Yeoh et al 2004a).

This industrial regionalization strategy itself is a synergy of state intervention policies. Political leaders, in the initial phase, negotiate the projects' institutional framework that typically involves the garnering of special investment conditions in the host locations. They also secure endorsements from host-country governments to provide political patronage and protection to the projects, which are critical for attracting potential investors. Following which, government-led consortia, typically comprising of Singapore government agencies and government-linked companies (GLCs), take on the role of primary investors in the parks' development; justified by the perceived reluctance of firms in the private-sector to take on investments of such gargantuan scale, given the large amount of time before any realization of investment would materialize. Moreover, the high risks involved in venturing into a relatively undeveloped and unfamiliar locale renders such inherently unattractive to private enterprises, due to the uncertain political climate and investors' interests. In the later stages, government agencies actively market these projects to Singapore-based multinational enterprises (MNEs), on top of the internationalization of Singapore companies. The presence of government agencies and government-linked companies, as 'business architects' and 'knowledge arbitrageurs', adds weight to these promotional efforts.

This paper, in a continuation of our empirical series on Singapore's regionalization initiatives, hence focuses on the created variables of this selective intervention, as well as the attractions posed by the park's partners to investors. We aim to test if these variables were similarly perceived as such by the resultant investors in the parks, and also how they measure up to the realities of the host business environments. In the following section, we outline the theoretical considerations that underscore Singapore's regionalization strategy. This is followed by an overview and explanation of the political and historical backgrounds of the case-study parks. Thereafter, we detail the methodology of our field research, and present our findings and the preliminary inferences we draw from them; and then, with reference to the empirical findings, we discuss the issues and challenges the parks face, and finally conclude that, while the

parks have achieved some limited success, they have been, and continue to be, prone to complications radiating from the socio-political dimension.

Theoretical Considerations

Dunning's (1980, 1988) eclectic paradigm sought to provide the analytical basis for explaining the activities of firms situated beyond their national boundaries. The OLI paradigm was used to explain the ability and willingness of firms to serve markets, and examine the reasons for their choice of exploiting this advantage through foreign production rather than domestic production, exports or portfolio resource flows through the interaction of Ownership-specific (O) advantages, Location-specific (L) advantages, and Internalization-incentive (I) advantages. The paradigm was reconfigured to constitute the 'asset-augmenting' aspects of FDI and MNC activity. For instance, O-advantages have been separated into static and dynamic - static advantages describing the advantages possessed by a firm that generate income at a particular point of time and dynamic advantages illustrating the proprietary factors which permit a firm to boost its incoming-generating assets over time.

Dunning (1998), Porter (2000), and others (surveyed in Jovanovic 2003), have further reiterated the importance of the spatial dimension, such as location-advantages as affecting the competitiveness of investing firms. The strategic choice of firms' locations reflects twin aims - to not only transfer their resources to the host countries, but also to gain access to the available strategic assets (Makino and Delios 1996). Like O-advantages, L-advantages can also be classified as static and dynamic. While an industrial township facilitates companies' resource-dependent operations with its static L-advantages, the geographical concentration of such activity also engenders dynamic L-advantages such as asset-augmenting activities (e.g. R&D) and agglomeration benefits. Given their deeply entrenched sources, these dynamic L-advantages cannot be easily replicated elsewhere (Markusen 1996). The location in which firms locate their production, organization and use of assets emerges as a critical competitive advantage.

The roles of governments in advancing the competitiveness of a country or region within a country need to be altered accordingly, as created assets supersede natural factor endowments as a key determinant of location (Dunning 1995, 1997a). Dunning (1997b) and Stopford (1999) also argue that governments need to ensure that the availability, quality and cost effectiveness of general purpose inputs have to match up to the standards of their global competitors, as well as to create and sustain an institutional framework and ethos. This is to facilitate a continuous upgrading of the resources and capabilities within its jurisdiction and facilitate, rather than impede micro-regional clusters development and upgrading.

Singapore's industrial township projects in Indonesia, Vietnam and China, represent collaborative efforts by the Singapore and respective local governments to create location-bound advantages within more uncertain environments, through a propitious combination of cost-effective factors of production, efficient infrastructure and management expertise; i.e., supplementing natural location-specific advantages with engineered ones crafted to attract foreign direct investments to the parks. Our field research, therefore, tests whether this mix of advantages has been successful in attracting investment to the parks; and, perhaps more importantly, the tangibility of, and the success of said advantages in retaining said investment; in the face of an ever-changing economic landscape and the mixed enthusiasm of potential investors.

Singapore's Overseas Industrial Parks

Background

The first of the industrial-park programs, Batamindo Industrial Park (BIP), was launched in 1992 as a joint-venture between Singaporean government-linked companies (GLCs) and the Salim Group of Indonesia. Singapore's leading industrial infrastructure builder Jurong Town Corporation (JTC) and Singapore Technologies Industrial Corporation (now SembCorp Industries) headed the architectural, physical and managerial responsibilities of the estate. The Salim Group, with its close ties with senior politicians, was assured priority with regards to regulatory control and government permission. This delegation of duties enabled the management to secure top-notch placing on regulations in the host country, without compromising the Singaporean quintessential values of transparency, reliability and efficiency.

Vietnam-Singapore Industrial Park (VSIP) was conceived in line with Singapore's prosperthy-neighbor policies, to heighten the development of fellow ASEAN nations. More importantly, the VSIP model also served to replicate confidence in Singapore's success in Batam (Indonesia), in providing another low-cost industrial enclave for Singapore-based manufacturers to re-distribute their operations. The idea was first mooted by the then- Vietnamese Prime-Minister, Vo Van Kiet, and Singaporean then-Prime-Minister, Goh Chok Tong in 1994. Singapore made efforts to nurture a strong working relationship with the local authorities. The formation of a management board, chaired by Vice-Chairperson of the Binh Duong Province People's Committee sought to dispel all perceptions that the project had been forced upon by the central government. The Board, with members from various ministries in the government, supervises the allocation of permits and licenses. VSIP is jointly established and managed by a Singapore business group led by SembCorp Industries, and Becamex, a Vietnamese state-owned enterprise in Binh Duong Province.

Unlike BIP and VSIP, the China-Singapore Suzhou Industrial Park (CS-SIP) project was a project set out to showcase the Singapore industrial development model as well as a source of diplomatic leverage with more populous nations. This, in turn, was intended to endorse the perception of Singapore's policymakers that the city-state's reputation for efficient and transparent administration could be marketed to the region. CS-SIP was set up as a joint venture between a consortium of Chinese and Singapore-based investors; the Chinese consortia's then 35 percent stake was shared amongst 12 organizations, mainly national state-owned enterprises and investment companies of the Suzhou city and Jiangsu province, while the Singapore consortium's initial 65 percent stake was distributed amongst 24 organizations, mainly Singapore GLCs, and the Salim Group' subsidiary, KMP China Investments. The two groups retained separate identities and responsibilities, taking up projects according to their agreed roles (SIPAC, 1999). CS-SIP was officially launched in 1994. However, the slow progress in the initial years resulted in financial losses for the Singapore-led consortium, which funded the land development and infrastructure, and also for Singaporean investors involved in peripheral projects. In June 1999, it was announced that Singapore would transfer 30 percent ownership to the Chinese consortium in 2001, retaining only a 35 percent share in the project. Following this change in, for lack of a more descriptive term, priorities, performance in the park changed rapidly for the better, as we note in the following section.

Enclaves for Enterprise

The archetypical industrial park, BIP, was constructed to be self-contained, with communications and linkages running through straight to Singapore, thereby circumventing Indonesian authorities. The estate includes amenities like power generators, water treatment plant, sewerage system, telecommunication facilities and business centres. BIP also has its own shipping provider and warehouses, to cater for consignments to and from Singapore. The aim of this design is to emulate a manufacturing domain similar to that of Singapore's, procuring prime Singaporean standard and quality in a low-income economy. BIP also engages the services of an employment agency to source for workers in Indonesia, mainly recruited from Java and Sumatra. Of the 65,000 workers in BIP, over 85% are female, aged between 18 and 22.

BIP's first tenants were mainly the subsidiaries of multinational corporations already expanding in Singapore seeking to lower costs while maintaining close proximity to their higher end Singapore-based operations. Cumulative investments and export value peaked at US$2million in 2005 and the occupancy stands at 85 in 2005. Of these, the highest concentration was that of Japanese companies at 39, with Singapore-owned companies a distant second at 25. American and European investors accounted for less than a fifth of the tenant base. There is a high concentration of electronics operations, and supporting operations to the electronics sector.

Like BIP, VSIP is designed as a self-contained, self-sufficient industrial park with prepared land plots, and ready-built factories, offering a hassle-free, one-stop service, and Singapore-style management expertise and infrastructure support. To ensure strategic proximity, VSIP is located in Binh Duong Province, just 17km north of Ho Chin Minh City, and less than an hour's drive from the international airport and seaport. A 300,000 working population in a 15-km radius also provides a ready talent pool of skilled and low-cost workers. Investors in VSIP have priority in employing graduates from the Vietnam-Singapore Technical Training Centre.

VSIP's first tenants included 3M, Sandoz, Sakata Inx, Godrej (India), Liwayway Food Industries, and a mix of Singapore manufacturers like ST Automotive and Star Chemicals. However, unlike BIP, where the concentration on electronics and other light industries ties in with the restructuring of Singapore's manufacturing sector, VSIP is less selective in its tenant-profile; the tenant-mix reflects the overpowering importance of Asian MNEs (85%), while the sector mix ranges from textiles, to electronics and pharmaceuticals. Singapore and Asian countries are represented by various sectors, while the Japanese tenants are highly concentrated on electronics. VSIP's major tenants include Konica, Nitto Denko, Kimberly-Clark, Diethelm and Roche. VSIP has 138 committed tenants from 21 countries, of which 80 are already operational.

CS-SIP was more ambitious, and controversial, as an overseas township project. Designed for its projected 360,000 population, the industrious project was envisaged to be a balanced environment with state-of-the-art urban facilities. CS-SIP was designated as the future of commerciality in Suzhou and the surrounding areas. The Singapore model, as applied to CS-SIP, promised an administration facility that has independence from certain governmental ministries and investments in administrative processes (Cartier, 1995). Like the prototype-BIP, it provided high-quality infrastructure, pollution control, 'one-stop' and corruption-free operating and decision-making processes, minimal entry/performance regulation, transparent financial charges, and the delivery of social and welfare services to support an efficient and co-operative workforce and a work-oriented community.

Contrary to the expectations of many pundits, investments began to pour in almost immediately after the transfer of ownership to the Chinese partners; by June 2001, 193

investment projects worth over US$5.1 billion were recorded. To-date, CS-SIP has attracted over 1300 foreign companies and 6500 domestic companies, accounting for a cumulative contractual foreign investment in excess US$16 billion, and cumulative contractual domestic investment of RMB30 billion, with 75000 jobs created. CS-SIP, named as one of the 'next frontier tech cities' of the world by Newsweek, has established its position as an investment hub for *Fortune 500* companies. Over 75 percent of the investments are in electronics, information technology and other high-tech segments. The next phases for construction of transportation networks and other infrastructure developments are at an estimated cost of US$10billion. CSSD plans to list in China, and possibly, Singapore, within the next 1-2 years.

Field Research

Analysis of the Singapore-styled parks, relying primarily on secondary data from official publications and press reports, is not enough to ascertain the situation on the ground. To obtain primary data from the tenants of parks, we applied the questionnaire developed in Yeoh et al (2000), and surveyed the case-study parks on the differential impact of various pull factors on firms' investment decisions, along with the differential impact of different types of constraints on their operations.

Methodology: Questionnaire Survey

The questionnaire was designed as a comparative study to investigate the various factors influencing firms' investment decisions, along with the problems faced by their operations; specifically, to test tenants' perception of the created variables meant to give the parks an advantage, as mentioned earlier in this paper, as well as measure said past perception against the current reality. The question sets for the tenants in the three industrial parks are similar. The surveys sought to highlight the different push/pull factors facing the park tenants when they chose to relocate their operations in the respective parks, and the operating constraints faced by the respective park tenants. The survey focused on three main areas. Firstly, the basic profile of the respondent: type of ownership, nature of operations, number of employees, sales turnover and its market orientation. Secondly, the factors that attracted the respondents to invest in the park. Data on various constraints was gathered in the third section.

Questionnaire surveys were conducted in Indonesia, Vietnam and China from December 2003 to May 2005. A total of 232 responses were collected from tenant-firms: of these, 52 were located in BIP, 48 were located in VSIP and the remaining in 132 in CS-SIP. In all cases, the surveyed tenants were carefully selected so as to obtain a representative distribution of all tenants in the park across both industry and nature of operations; to illustrate this distribution, the respondents were further reclassified in terms of type of ownership, nature of their operations, number of employees, and target markets. The surveys were conducted through face-to-face interviews in the case-study parks lasting an average of 45minutes, with staff in senior managerial positions or above present in all cases, to ensure the response of the selected tenants, and the holistic and accurate nature of the obtained responses.

Statistical Analysis: Logit Estimations

Apart from analyzing the descriptive statistics and popular rankings on the responses relating to factors and constraints, a logit model[2] was applied to compare the perceived advantages influencing the tenants' decision to locate in the case-study parks. A similar model was also applied to the constraints faced by the tenants in these parks. The logit estimations are set out in Tables 1, 2 and 3 respectively.

Factors Influencing the Respondents' Decision to Locate in the Case-Study Parks

(Table 1)

Of the many supposed created advantages brought to the table by the Singapore connection, the two most emphasized in both advertising and academic literature have been the 'Singapore system', i.e. the 'exported' infrastructure and managerial expertise, and the 'Singapore commitment', or more simply, the political affiliation engendered by the combination of the involvement of two co-operating states, and of the managing government-linked corporations. Considering the advantages of the latter trumpeted by the involved parties, then, perceptions across the three parks proved, much as in our previous reports, surprisingly mild; only in BIP was political commitment (of both the Singapore and host governments) perceived to any statistically significant degree, and in VSIP political commitment seemed all but a non-issue. One interesting trend, however, is easily noticeable in both BIP and CS-SIP; Singapore-owned respondents in both parks placed relatively more emphasis on the political commitment of the Singapore government (to a significant degree in BIP, as evidenced by the statistically significant $\alpha_1 = 1.7842$), while joint-venture companies, in contrast, thought of the political commitment of the host government as a more pertinent issue (again, to a significant degree in BIP, as evidenced by the statistically significant $\alpha_2 = 2.1447$) – a disparity of opinion possibly, but not totally, attributable to home bias, many of the joint ventures being partially Singapore-owned themselves.

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[2] The logit model involves a binary choice of the i^{th} firm which can be represented by a random variable, Z_i, which takes the value of 1 if a certain choice is made and the value 0 if that choice is not made. The (cumulative) *logistic* distribution function, estimated by the maximum likelihood, takes the following form:

$$P_i = exp(Z_i) / [\ 1 + exp(Z_i)]$$

where: P_i is the probability of firm i choosing the factor in question; exp refers to the exponentiation operator and Z_i is a linear function of the firm attributes, defined as

$$Z_i = \alpha_0 + \alpha_1 S + \alpha_2 J + \alpha_3 P + \alpha_4 M$$

where: S = 1 if wholly Singapore-owned, 0 otherwise; J = 1 if established via Joint-Venture, 0 otherwise; P = 1 if producing intermediate products, 0 otherwise; M = 1 if producing industrial services, 0 otherwise; α_0 = constant term; and α_i = coefficient of independent (explanatory) variable.

Hence, if the estimated coefficients in the logit model is statistically significant (as indicated by the *z- statistics* and *p-values*, this would imply that the probability of a firm (e.g. foreign-owned) choosing a particular factor is greater than the probability of another firm (of different ownership type) making the choice, after taking into consideration the types of goods and services produced.

The other half of the Singapore equation, too, returned rather interestingly mixed figures. Joint ventures in BIP gave the snub to the presence of infrastructure facilities and support services, with a significant and negative α_2 (= -2.6465), while other demographics across the parks returned statistically insignificant but often negative responses. One of the greatest perceived advantages of Singapore-styled infrastructure, its reliability, returned no significant responses at all; tenant firms, it seems, were rather indifferent to this particular created advantage. The formulaic one-stop service, on the other hand, garnered more positive responses, with positive and significant results from smaller firms in BIP and firms engaged in capital good production in CS-SIP, perhaps due to the nature of the industries these firms are involved in – we note that firms engaged in capital good production returned positive responses across all three parks, and many firms with few employees in BIP are engaged in highly automated production processes, which would necessarily rely heavily on efficient and convenient infrastructural facilities. However, at the same time, smaller firms in CS-SIP were instead less likely to consider this as an advantage drawing them to locate in the park, from the statistically significant and negative α_{11} (= -1.0551); while respondent profiles partially explain this, as smaller firms in CS-SIP tend to be more involved in mid- to high-level production and services which tend to require more specialized services, it does not provide a total explanation for this curious result. Nonetheless, the conclusion can be drawn that infrastructural advantages seem to not quite have lived up to their name – insofar as providing 'advantages' over the competition.

More practical considerations, in contrast, ruled the roost. Firms engaged in capital good production in CS-SIP found industrial relations a pertinent factor, from the positive and significant α_{10} (= 1.3184). Access to overseas markets proved to be a non-factor, but access to domestic markets were apparently perceived to be invaluable by smaller firms in both CS-SIP and VSIP, signalling a distinct market focus on the part of these smaller companies; whereas firms of all sizes, and those engaged in capital good production in particular, all returned positive and significant results for preferential access to target markets, reflecting, in all likelihood, the continuing attractiveness of the growing Chinese market. Labour issues proved probably the most significant of all; availability of labour was a highly significant advantage for both smaller firms in BIP and Singapore-owned firms in CS-SIP, whereas competitive labour costs seemed to be a recurring factor for Singapore-owned firms, with positive and significant results (α_7 (= 1.0166) and α_{13} (= 2.4222), respectively) returned for these firms in both CS-SIP and VSIP – implying, perhaps, a certain preoccupation on the part of Singapore companies with 'cheap labour', born possibly out of rising labour costs in Singapore, and contingent with the ostensible aims of the city-state's regionalization programme. Clearly, too, a certain perception of cheap labour in China and Vietnam subsisted among these firms at the time of their entry; the veracity of this perception, however, would prove to be of especial significance to Singapore companies in CS-SIP, which were relatively less likely to have chosen a location based on availability of skilled labour, as shown by the negative and signficant α_7 (= -1.0928). Such firms, it seems, may well have intended to utilize either only unskilled labour, or else to import skilled labour from other countries, most likely their own; signifying, in all possibility, a less than positive perception of Chinese skilled labour at the time of entry – something which may seem, in hindsight, a rather curious perception, given the track record of China's business and industrial professionals in recent years.

Major Constraints on the Respondents' Operations

(Table 2)

While perhaps less the case now, though, such perceptions may well have been at least partially justified, from the large number of significant results returned for labour-related issues by respondents in CS-SIP; firms engaged in the production of capital goods suffered relatively more from a shortage of skilled labour, but relatively less from a shortage of professionals and managers, perhaps owing to the specific labour requirements of the industries these firms are engaged in. Joint ventures in CS-SIP were, instead, the ones to suffer a shortage of professionals and managers, whereas, their Singapore-owned counterparts experienced relatively more problems with low labour productivity instead. The possible signals, then, are twofold – firstly, that while rapidly improving, Chinese professionals may not yet be up to the standard required by tenant firms in CS-SIP; and secondly, more simply, that perceptions of a vast pool of labour to be tapped (that horde of job-stealing faces politicians in certain quarters love to hate) were, to say the least, overblown. The reality, in all likelihood, lies somewhere between the two; while it certainly seems to be true, from our previous studies, that Chinese labour is not as plentiful as initially imagined, it is also true that our interviews often produced accounts of having to train local labour from scratch – often, perhaps unsurprisingly, from firms engaged in more specialized industries. Singapore firms in CS-SIP, instead, had other problems to deal with; the only demographic to return positive and significant figures for impact of government regulations and lack of transparency and/or frequent changes in host regulations – and, indeed, the only demographic in CS-SIP to return positive figures *at all* – it is exceedingly obvious that Singapore companies, rightly or not, seem to generally feel rather hard done by local Chinese authorities. Partially due to complexities between the central and local authorities in China, it nonetheless remains an inescapable fact that political commitment, in this case, seems to have created little to no real advantage for firms in CS-SIP.

Tenant firms in BIP, on the other hand, experienced a different brand of trouble; joint venture firms (β_2 =2.0163) and larger firms (β_6 =1.7049) both listed industrial relations problems as among the main hindrances to their operations, pointing to, possibly, a certain cultural disconnect between larger firms in BIP and other interested parties, such as local authorities and workers' groups – larger firms in particular as, we note, Singapore-owned firms in BIP also seem to encounter this problem fairly frequently, though not quite to a statistically significant degree. The exact reason for this is, unfortunately, unclear from our interviews; however, given the rather rapid changes in political allegiance in Indonesia since BIP's inception, the possibility comes to mind that the issue at hand may well less be an issue of unfriendly industrial relations, than industrial relations not as friendly as expected.

In terms of more economic constraints, the endemic problem of high and rising costs alluded to in our previous papers on this subject shows itself again, with nearly all demographics returning positive results for this constraint; as time goes on, however, tenant firms seem to have, if not solved, then grown used to the problem – not a single demographic identified it as a *main* constraint, as shown by the lack of significant results. Difficulty in securing funds for expansion, too, seemed to not be a problem – although this, we note, is quite possibly due to limited plans for expansion in the first place. Instead, the issue of competition from overseas competitors proved the main point of contention, with some demographics identifying it as a main constraint and others not finding it a problem at all. Some of the results were rather curious; large firms in

BIP, the same which complained of frequent industrial relations problems, found overseas competition not a problem at all, from the negative and highly significant β_6 (=-2.8123), as did producers of capital goods in CS-SIP, which, from their positive results for access to the domestic market (corresponding with their negative results for access to overseas markets) and their positive and significant results for preferential access to target markets, are almost certainly selling to the Chinese market – which should, in all probability, result in them facing intense competition from overseas competitors. The former would seem to support the aforementioned theory of 'industrial relations problems' that are less real problems than the lack of, for lack of a better term, overly friendly relations; while the latter, with reference to practical economics, may not be as surprising as all – local is best, after all, when it tends to be generally cheaper. Less surprising results include producers of intermediate products in BIP and Singapore-owned companies in CS-SIP finding overseas competition relatively more troublesome; the former is almost a given, with intermediate products being largely sold overseas and with only a limited domestic market in Indonesia to ameliorate the problem (although we find that producers of the same in VSIP, though ostensibly in much the same circumstances, seem to suffer less from this problem) whereas the latter is most likely a result of the limits on the ability of wholly Singapore-owned companies to establish themselves in the same way partially-Chinese companies can; the same limits faced, most probably, by most other overseas competitors. Singapore companies, it seems, garner no favouritism, even in a Singapore-styled industrial park. In some cases, local really *is* best.

Issues and Challenges

Investment enclaves or 'shaded places' attract foreign direct investment (Lundan 2003), and Peck (1996) suggests that these investment clusters form in and around centers of international infrastructure. The Singapore-developed parks sought to capitalize on this by combining superior infrastructure with a range of exclusive investment concessions acquired via negotiations with the various stakeholders in the host countries, acquiring a host of (at least initially) mostly unprecedented and exclusive privileges that provided a competitive advantage over competing locations. For example, the parks were permitted to build and run their own on-site power and water treatment plants as well as telecommunications facilities; the result being that these parks enjoyed reliable infrastructural facilities in locales where water cut offs and electricity blackouts were common. Furthermore, the parks' management boards more often than not included government officials from the host country. This arrangement was to facilitate the parks' privileged access to investment approvals, endorsements for construction activities as well as immigration-related permissions and import/export permits. This synergistic combination of factors rendered the parks self-sufficient and capable of offering investors the formulaic one-stop service that the Singapore-styled infrastructure is reputed for; services otherwise atypical in emerging economies beset with administrative uncertainties. In addition, the parks would supposedly attain credibility through their inherent association with Singapore, which has enjoyed a positive reputation with various multinational corporations for its stable, corruption-free business ethos. Furthermore, strategic alliances between Singapore's own state enterprise networks and its counterparts in these regional sites were critical in mobilizing the financial resources to complete these multi-million projects. In most cases, these were achieved within a relatively short time frame of 18 to 24 months.

Our empirical findings ascertain that the investment-friendly institutional framework as laid by the Singapore and host governments, plus factor availability and, in the case of CS-SIP, the

perception of more conducive industrial relations, have been instrumental in engendering a competitive environment within the townships. Tenants within these parks have reaped significant advantages through tapping on the low-cost competitive environments, on top of relying on Singapore's infrastructure, management and expertise. It should also be noted that Singapore's reputation with multinational corporations was, in fact, perceived to lend a measure of credibility; some firms, in our interviews, pointed to this as a significant factor in their decision to locate within their respective parks.

Nonetheless, even the strategically engineered inter-government endorsement of the flagship projects, plus the huge amount of resources mobilized through these strategic partnerships, have failed to shield the parks from a gamut of all too practical problems; and that, in certain cases, these state linkages may have even failed to eliminate, and even engendered, political pressures on these supposedly politically-blessed enterprises. The following observations update, and offer new insights, on recent developments in these industrial-township projects.

Economics of Market Competition

Singapore's overseas industrial parks are facing mounting competition from competing parks in their vicinities. Competitor parks, some with strong political patronage, have burgeoned around BIP; for instance, Panbil Industrial Park is located just beside BIP and boasts facilities comparable to the Singaporean-developed township. Also, many of these competitor parks are able to offer more attractive rates than BIP. Cost-conscious tenants facing rising labour and material costs in BIP may be tempted to relocate their operations, as stated by several firms during our on-site interviews. Likewise, VSIP's attractiveness has been eroded by competition from newer industrial estates such as the Linh Trung Export Processing Zone, on top of incumbent parks such as the Tan Thuan Export Processing Zone. Established by experienced and street-savvy developers from Taiwan, China and Thailand, these competitor parks market themselves aggressively on price, charging lower transportation fees accruing from more strategic locations.

SIP, likewise, has not spared the intense competition arising from the adjacent Suzhou New District as local officials have chosen to market the latter over SIP. Such competition has somewhat subsided after control over SIP was handed over to the Chinese partners, when the interests of the Singapore and local stakeholders came into somewhat better alignment. Nevertheless, SIP continues to face competition from the nearby Pudong New Area and China's five special economic zones in Shenzhen, Zhuhai, Shantou, Xiamen and Hainan. These industrial centers are part of China's larger strategy to attract foreign investments and thus share similar privileges and political status with SIP. In recent years, these locations have upgraded their industrial structure and innovated on their management systems, rendering themselves increasingly competitive vis-à-vis SIP. The simple economics of competition have marginalized the premium attached to the 'superior infrastructure' which was the selling point in all of Singapore's industrial-investment enclaves. Moreover, all of these parks' supposedly exclusive investments incentives will, in all likelihood, prove no more than a temporary advantage over the rapidly improving competition.

Vagaries of Political 'Allegiances'

The 'institutional' framework of the flagship projects in Indonesia, Vietnam and China rested heavily on personal ties. Over time, these have declined due to various political and social factors stemming from the host environments (Yeoh et al, 2005). In the BIP project, the reliance

on the Salim Group was necessary due to the context of 'crony capitalism' the Indonesian system fostered by then-President Soeharto; Salim's political and commercial influence has, however, waned in the post-Soeharto era. As well, inter-governmental endorsements no longer suffice to secure commitments at the lower tiers of government. Anecdotal evidence from on-site interviews suggests a more complex regulatory environment and increased bureaucracy for foreign investors. Tenants now have to deal with provincial governments on top of the sub-provincial or district authorities. BIP's reputation as an investment enclave has also been weakened by political developments in the wake of the Asian financial crisis, the September 11 attacks in the United States, the Bali-Jakarta bomb blasts and negative press reports on active terrorist cells within the region. In recent years, Indonesia has experienced a greater degree of stability, but the climate remains far from ideal – especially as, in the midst of continuing economic uncertainty, the Indonesian administration has recently concluded negotiations with Singapore to tap into the city-state's expertise to further develop Indoneisan industrial parks in the same vein as BIP.

In Vietnam, investments in VSIP were expected, *in situ*, to benefit from Singapore's ability to secure special concessions. These initial expectations now seem roseate, as inter-government endorsement (in the spirit of ASEAN economic co-operation) has proved insufficient to secure similar commitment in the lower tiers of government. In VSIP, the influence of local administrators, and their interests in competing developments, has compromised the significance of inter-governmental endorsement of the project. The 'special' support from the local authorities has proved to be less significant than envisioned. Improvements on infrastructural projects have translated into a plethora of miscellaneous fee, and added to operating costs - doubtless a far cry from the aid envisioned by majority of tenants who were attracted by the Vietnamese government's perceived political commitment to the project, who now rate government regulation as one of their greatest constraints vis-à-vis CS-SIP. Our on-site interviews further reveal negative undercurrents over Singapore's control and management of VSIP. Anecdotal evidence suggests that tensions have arisen over the Singapore-styled management practices, and these have materialized in perception differences, protracted conflicts and project delays. Although it has not blown into a major issue, it is without a doubt a growing one. Local sentiments towards the Singapore seem to mirror those expressed in the Suzhou-Wuxi experience in China, albeit to a lesser degree. Significantly, SembCorp Industries has announced plans to divest itself of part of its stake in VSIP to reflect a better 'alignment of interests', even as the project is finally registering positive returns on its investment (Yeoh and Wong 2006).

In China, SIP's progress was initially hampered by an approach that was unsuited to the local administrative context. Although the project was endorsed by senior politicians both in China and Singapore, this did not automatically translate into cooperation at the lower tiers of government. Instead, local authorities chose to promote the existing Suzhou New District, arguably on the basis that they had greater ownership in this development as opposed to SIP, which Singapore controlled. Since 2001, this misalignment of interests has been rectified by the handover of control to the Chinese, and the appointment of key officials previously steering Suzhou New District to leadership positions in CS-SIP. The park's managing board is currently jointly headed by Chinese Vice-Premier Madam Wu Yi and Singapore's Prime Minster Mr Lee Hsien Loong. Such realignment of interests has, at face value, resolved the 'paradox of context' (Pereira 2003), which encumbered the SIP initiative. However, SIP yet shares the political patronage of the Chinese officials with many of its competitors (Yeoh et al 2005).

Conclusion

The progress of Singapore's overseas parks over a comparatively short period of time indicates the ability of the Singapore's state enterprise network to mobilize economic and political resources to create economic space to maintain her economic competitiveness. These projects have obtained special investment conditions within their overseas localities, with government endorsements that further underscoring its significance. Our previous reports on the subject, however, have shown that the economics of competition will not be ignored, nor have the parks' political patronage been sufficient to shelter them from socio-political complexities unique to the individual environments; our latest results corroborate these, and further imply that, while the parks (and their tenants) are beginning to adjust to economic realities, the dynamic nature of the socio-political environment continues to present additional challenges to park managers.

In Indonesia, the case of BIP has been a measured success, judging from its current level of foreign investment; too, it has indeed accomplished the Singapore government's initial mission of developing an investment enclave utilizing Singapore-styled administrative and infrastructural constructs. These initial goals aside, however, the way forward remains unclear for the park, despite the recent relative political stability in Indonesia; investment momentum remains sluggish, as the endemic problem of increasing competition (both for foreign investments, and from foreign competitors) is further complicated by additional socio-political disharmonies. Given the nature of industries in BIP, and their large initial investment and infrastructure outlays, it continues to be unlikely that investors, in the short run, will pull out and relocate their operations; at the same time, however, it becomes increasingly certain that the long-term will depend on the ability of both tenant firms and park administrators to work through socio-political issues that arise.

In Vietnam, the additional agenda vis-à-vis CS-SIP was that the host nation is a fellow member of ASEAN, and promoting economic development in VSIP was one prong of Singapore's prosper-thy-neighbor policies. This is apparent from the mix of 'targeted' industries, as well as the park's management style and operations. In recent years, as previously noted, the park's performance has taken a positive turn, and our results show, similarly, a distinct lack of particular issues with which VSIP tenants find a hindrance to their operations; however, endemic issues such as rising overhead costs yet subsist, and together with competition from industrial parks overseas, are placing growing pressure on the park and its tenants. The park remains viable, but unspectacular; it is telling that our results show few significant results at all, whether with regard to pertinent constraints, or in favour of the park's advantages. At the current time, however, VSIP remains relatively free of socio-political complications, and economically yet maintains a respectable degree of competitiveness.

In China, CS-SIP was, given current literature, almost certainly a strategic thrust by the Singapore government to capitalize upon first-mover advantages in a regional economy with immense market potential; as well as to both enhance Singapore's reputation for infrastructural efficiency, and leverage the foray of Singapore companies into China's infrastructure plans and commercial-residential township projects. Following the handover to the Chinese partners, CS-SIP has indeed been doing very well for itself, as can be seen both from its economic results, and from the upbeat tone of the respondents from the park. However, several labour issues remain to be resolved such as the endemic 'Singapore-symptomatic' problem of rising overhead costs as well as keen competition from domestic parks; minor issues that might as yet balloon into major ones as more and more global entrants seek to tap on China's enormous domestic potential, much as CS-SIP is doing. CS-SIP, however, is adjusting to these familiar problems; it is other

issues, such as continuing disparities of expectations, and the reality, of labour in China, as well as what appears to be unresolved issues with local authorities, that seem poised to plague the park for the near future. That these issues should once again arise is indeed worrying; especially as, in other empirical results not included due to a dearth of data from VSIP, joint venture firms in CS-SIP chose, as their top two strategies for the future, the adoption of new technologies, and relocation to other local parks.

In summary, our findings in this paper largely reinforce our previous conclusions; that while the underlying theories for Singapore's regionalization stratagem and, *pari passu*, the strategic advantage created for firms within these industrial-townships have revealed undoubtedly tangible and remarkable results, these industrial parks nonetheless remain at risk from the socio-political contexts and administrative complexities that stem from the various host environments – even as, the current figures suggest, the parks adjust to economic and competitive realities. This paper, indeed, contends that while an interesting concept, the idea of porting an entire management system and infrastructure to other countries was overly optimistic in the first, and further failed to take into account certain realities inherent in the regionalization process. The parks, while having each evolved into a respectable entity on their own, are now feeling the effects of this overenthusiasm; and while dealing quite admirably with the economic aspect (or, perhaps, simply growing used to the challenges presented), continue to reel from the shifting currents of their individual socio-political environments – continuing to be, it seems, despite various measures and realignments, strangers in a strange land.

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Table 1: Factors Influencing Firm's Decision to Invest in the Park

	Batamindo Industrial Park						China-Singapore Suzhou Industrial Park						Vietnam Singapore Industrial			
	Type of Ownership		Nature of Operations		Firm Size		Type of Ownership		Nature of Operations		Firm Size		Type of Ownership		Nature of Operations	
	Singapore Owned	Joint Venture	Intermediate Products	Capital Goods	Less than 100	More than 500	Singapore Owned	Joint Venture	Intermediate Products	Capital Goods	Less than 100	More than 500	Singapore Owned	Joint Venture	Intermediate Products	Capital Goods
Industrial Relations	NA	NA	NA	NA	NA	NA	0.6594	0.1721	-0.4302	1.3184	1.4784	-30.2542	-0.2717	-33.7128	0.3408	39.512
	NA	NA	NA	NA	NA	NA	0.3213	0.8441	0.5965	**0.0650**	0.1695	1.0000	0.8301	1.0000	0.7584	1.000
Infrastructure Facilities and Support Services	-0.9947	-2.6465	-0.3981	36.5311	1.9602	0.3318	-0.3557	-0.0423	0.0479	-0.0625	-0.5085	-0.1870	0.6466	-37.5508	-0.2696	36.219
	0.2430	**0.0531**	0.6088	1.0000	0.1717	0.6784	0.4502	0.9438	0.9156	0.9175	0.2986	0.8574	0.4915	1.0000	0.7342	1.000
Preferentail Access to Target Markets	NA	NA	NA	NA	NA	NA	-1.0468	0.2169	-0.1352	1.1208	1.9287	2.9494	0.3675	-32.8352	0.0511	-33.099
	NA	NA	NA	NA	NA	NA	0.1890	0.7506	0.8208	**0.0952**	**0.0719**	**0.0401**	0.7192	1.0000	0.9611	1.000
Availability of Labour	-0.2350	-2.0462	1.4886	1.0995	2.6090	0.0220	1.2369	-0.2142	0.3287	0.6934	-0.4618	-0.6652	2.3019	38.9914	1.3517	-37.181
	0.7967	0.1059	0.1045	0.5156	**0.0962**	0.9794	**0.0142**	0.7945	0.5427	0.3053	0.3896	0.6067	0.0237	1.0000	0.1826	1.000
Political Commitment from Host Government	0.7548	2.1447	0.3261	0.7537	-1.7198	-0.0550	-0.1081	0.7865	-0.6302	-0.9574	-0.5894	-0.1244	-1.5685	-32.1779	0.4117	-31.172
	0.3393	**0.0204**	0.6504	0.6282	0.2197	0.9406	0.8204	0.2302	0.1682	0.1254	0.2378	0.9076	0.1848	1.0000	0.5995	1.000
Political Commitment from Singapore	1.7842	1.0603	0.2776	-33.6582	0.6146	0.4165	0.4702	-31.9179	0.5010	0.3394	-0.2149	2.0444	NA	NA	NA	NA
	0.0300	0.1905	0.7129	1.0000	0.6155	0.5863	0.5369	1.0000	0.5160	0.7668	0.7998	0.1218	NA	NA	NA	NA
Reliable Infrastructure in Industrial Estate	-0.0234	36.1442	0.3806	-37.0336	-1.0012	0.1925	-0.2110	-0.8217	0.6856	0.4617	0.0406	-0.2543	-0.3802	-0.4067	0.0247	41.677
	0.9784	1.0000	0.6543	1.0000	0.5288	0.8279	0.6637	0.1766	0.1718	0.4770	0.9350	0.8135	0.6465	0.7872	0.9756	1.000
Competitive Labour Costs	0.6168	0.0374	-0.8197	56.3143	57.1262	0.9195	1.0166	0.4666	0.4415	0.4395	-0.2983	0.2038	2.4222	37.1093	0.5672	-36.183
	0.6106	0.9694	0.4142	1.0000	1.0000	0.3008	**0.0402**	0.4792	0.3754	0.5074	0.5702	0.8500	**0.0149**	1.0000	0.4853	1.000
Availability of Skilled and Educated Labour	0.5101	1.1072	-0.9988	1.0780	0.1423	0.4901	-1.0928	0.0709	-0.4587	0.0757	0.5657	-0.7189	-1.4652	-33.3104	-0.7912	-31.273
	0.5192	0.1612	0.1542	0.5006	0.9059	0.5158	**0.0376**	0.9072	0.3283	0.9011	0.2567	0.5634	0.2166	1.0000	0.4178	1.000
One Stop Service Provided by Industrial Estate	-0.1736	-1.8497	0.0565	35.7936	2.5401	0.7141	0.5304	0.0852	-0.2486	1.0954	-1.0551	0.2760	-0.1331	-0.0228	-0.1836	72.448
	0.8441	0.1739	0.9470	1.0000	**0.0818**	0.4424	0.2762	0.8939	0.6139	**0.0809**	**0.0320**	0.7914	0.8723	0.9880	0.8149	1.000
Access to Overseas Market	-1.1587	1.2186	-0.2886	0.1825	-34.8907	0.6356	0.2133	0.4188	0.4667	-0.1869	-0.8172	-1.3085	-1.5073	-36.1173	0.7809	-32.864
	0.1818	0.1888	0.7005	0.9061	1.0000	0.3971	0.6833	0.5253	0.3403	0.7937	0.1010	0.2877	0.2174	1.0000	0.3727	1.000
Access to Domestic Market	NA	NA	NA	NA	NA	NA	0.3378	-0.2551	0.1104	0.8291	0.8033	1.5148	0.8612	0.0455	-0.7684	36.990
	NA	NA	NA	NA	NA	NA	0.5112	0.6836	0.8164	0.2420	**0.0977**	0.2158	0.3396	0.9762	0.3625	1.000

Table 2: Constraints Faced by the Firms in their Respective Parks

	Batamindo Industrial Park						China-Singapore Suzhou Industrial Park						Vietnam Singapore Industrial			
	Type of Ownership		Nature of Operations		Firm Size		Type of Ownership		Nature of Operations		Firm Size		Type of Ownership		Nature of Operations	
	Singapore Owned	Joint Venture	Intermediate Products	Capital Goods	Less than 100	More than 500	Singapore Owned	Joint Venture	Intermediate Products	Capital Goods	Less than 100	More than 500	Singapore Owned	Joint Venture	Intermediate Products	Capital Goods
Shortage of Skilled and Educated Labour	NA	NA	NA	NA	NA	NA	0.4819	-0.2269	0.4924	1.0400	0.1844	0.7867	-0.9959	-0.1880	0.3712	49.115
	NA	NA	NA	NA	NA	NA	0.3116	0.7162	0.2762	**0.0924**	0.7064	0.4554	0.2405	0.8994	0.6416	1.000
Shortage Professionals and Managers	-1.1121	-0.4394	0.3720	-33.9973	-33.4095	0.2998	0.5756	1.2733	-0.7252	-1.5260	-0.0209	1.0244	-0.6011	34.3768	-0.8053	-35.118
	0.2337	0.5989	0.6405	1.0000	1.0000	0.6906	0.2322	**0.0491**	0.1476	**0.0639**	0.9675	0.3501	0.5228	1.0000	0.3684	1.000
Low Labour Productivity	1.1222	0.7227	0.0409	0.9687	0.3341	0.0018	1.1165	0.8640	-0.7561	0.8597	1.3499	2.0327	-0.9402	1.1850	-0.4268	37.131
	0.1477	0.3544	0.9525	0.5323	0.7744	0.9981	**0.0791**	0.2627	0.3689	0.2627	0.2092	0.2043	0.4308	0.4366	0.6639	1.000
Industrial Relations Problems	0.9232	2.0163	-0.6300	1.7889	-0.9293	1.7049	NA	NA	NA	NA	NA	NA	-33.2046	-33.9560	1.5301	72.786
	0.2732	**0.0285**	0.4068	0.2706	0.5101	**0.0431**	NA	NA	NA	NA	NA	NA	1.0000	1.0000	0.2153	1.000
Lack of Good Supporting Services	0.5841	0.4938	-0.2265	-34.4220	-0.7583	0.7158	0.1876	-0.3768	-0.3106	-0.4497	0.2351	-0.2690	NA	NA	NA	NA
	0.4504	0.5257	0.7476	1.0000	0.5557	0.3166	0.7052	0.5910	0.5362	0.5209	0.6562	0.8287	NA	NA	NA	NA
Difficulty in Securing Funds for Expansion	0.6078	0.4639	-1.4096	-30.4823	0.6040	1.0263	0.0540	-0.1960	-0.7118	-1.8227	0.3967	-31.6347	-33.0137	2.9967	1.7151	1.180
	0.5405	0.6667	0.1369	1.0000	0.6733	0.3306	0.9178	0.7864	0.1963	**0.0877**	0.4823	1.0000	1.0000	0.1265	0.2359	1.000
High/rising Overhead Costs	0.7628	0.2734	0.0828	37.4481	0.2350	0.2314	0.7347	0.3146	0.5494	0.5186	0.3440	1.6284	NA	NA	NA	NA
	0.4053	0.7432	0.9147	1.0000	0.8576	0.7633	0.1308	0.6052	0.2320	0.3927	0.4803	0.1859	NA	NA	NA	NA
Impact of Government Regulations	0.1481	-0.4773	-0.8136	34.6664	0.3478	0.9992	0.8890	-33.3590	-0.1577	-1.0264	-0.8994	-0.4533	NA	NA	NA	NA
	0.8578	0.6142	0.3022	1.0000	0.7969	0.2422	**0.0925**	1.0000	0.7946	0.3507	0.1057	0.7297	NA	NA	NA	NA
Competition from Overseas Competitors	-0.4500	-1.5019	1.7619	32.1729	-1.1477	-2.8123	1.2311	-0.0791	0.7085	-1.3154	0.0305	-0.1618	-0.4061	0.0363	1.0908	33.066
	0.6813	0.1540	**0.0934**	1.0000	0.4887	**0.0435**	**0.0272**	0.8981	0.1465	**0.0616**	0.9520	0.8817	0.6378	0.9805	0.1816	1.000
Lack of Transparency/ Frequent Changes in Host Regulations	1.4456	0.9162	0.4550	-1.0462	-1.7501	0.1826	1.1383	-0.0754	-0.1529	-32.2727	-0.4943	-32.7282	NA	NA	NA	NA
	0.2297	0.3940	0.5962	0.5128	0.1803	0.8443	**0.0588**	0.9461	0.8273	1.0000	0.4542	1.0000	NA	NA	NA	NA